ESTIMATING DELTA CHANNEL DEPLETION BY DCD MODEL

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Delta Modeling User Group Meeting
February 21, 2018

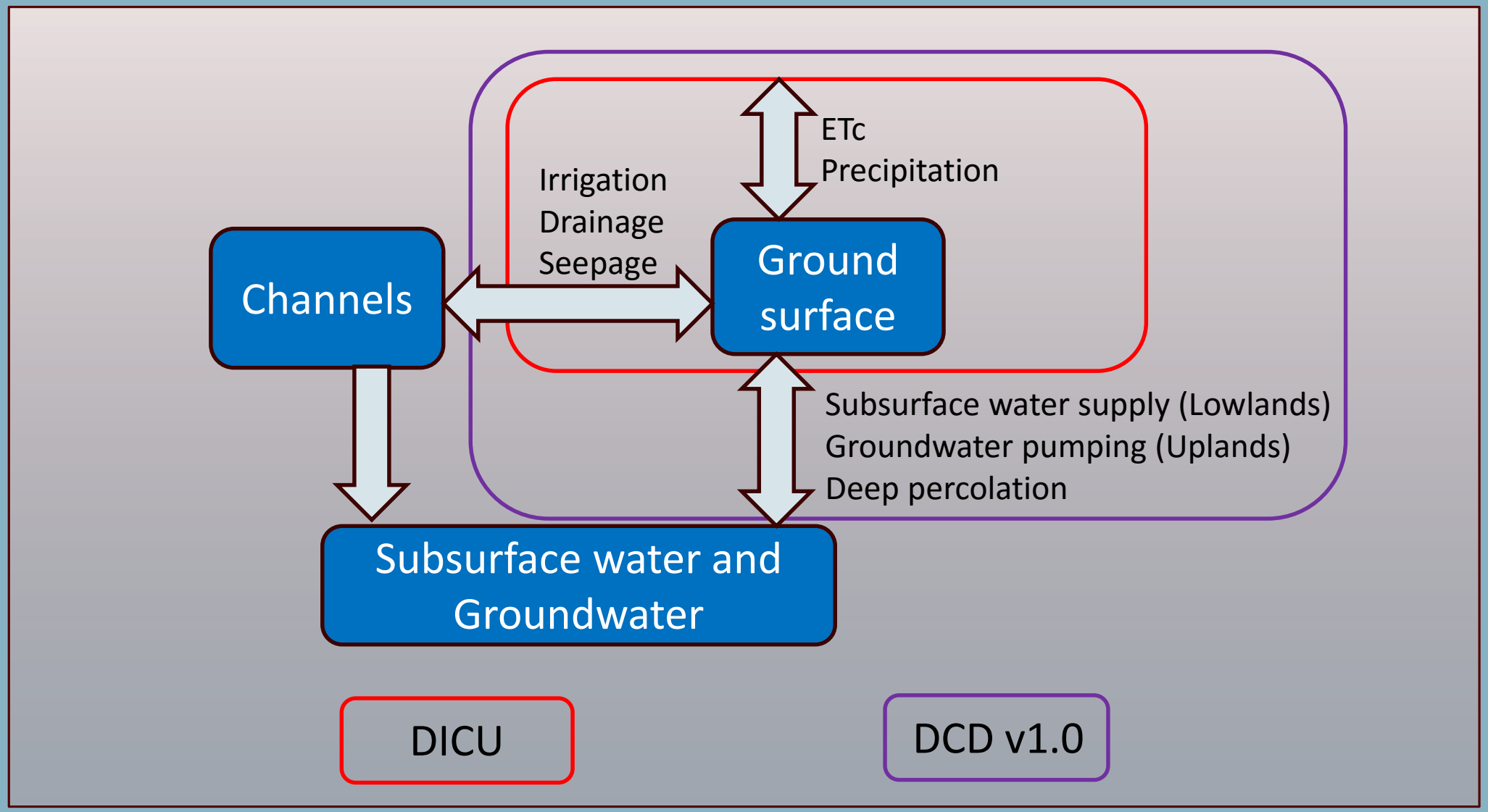
Background

- Delta channel depletion is the water transferred between Delta island ground surface and adjacent channels.
- Components of Delta channel depletion: diversion, drainage and seepage.
- Currently, Delta Island Consumptive Use (DICU) estimates the monthly Delta channel depletion for DSM2 nodes.
- Delta channel depletion is the input of DSM2 and other Delta hydrodynamics models.

What is DCD?

- Delta Channel Depletion Model
- An extension of Delta Evapotranspiration of Applied Water v2.0 (DETAW v2.0)
- DETAW v2.0 estimates the daily Delta island root zone water balance based on crop water demands. The root zone water balance is related to the water transfers between channels and islands.
- DCD estimates the impacts of the subsurface water and groundwater on channel depletion, which DETAW v2.0 has not considered.

The major difference between DICU and DCD v1.0



DCD impacts to Delta modeling

- Delta outflow
- Hydrodynamics
- Sediment transport
- Water quality
  - Salinity intrusion
  - Dissolved organic carbon
  - Other water quality constituents
- Recalibration needed

- Welcome to DCD and DETAW presentations in 2018 CWEMF!